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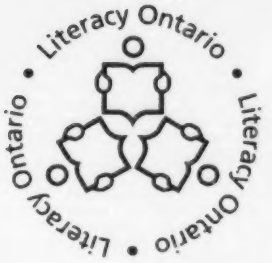
Literacy Ontario



Literacy Profile of Ontario's Immigrants

Literacy and Basic Skills Section
Workplace Preparation Branch
Ministry of Training, Colleges and Universities

Ontario

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LITERACY PROFILE OF ONTARIO'S IMMIGRANTS

Literacy and Basic Skills Section
Workplace Preparation Branch
Ministry of Training, Colleges and Universities

September 2000

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TABLE OF CONTENTS

EXECUTIVE SUMMARY 1

A. INTRODUCTION 3

1. Background 3
2. Study Objectives 3
3. Approach 4

B. SURVEY METHODOLOGY 5

C. BASIC LITERACY CONCEPTS 9

D. OVERVIEW OF IMMIGRANT LITERACY SKILLS 11

1. Overall Literacy Levels 11
2. Literacy Levels by Age Group 12
3. Literacy Levels by Immigrant Group 13
4. Literacy Levels by Immigrant Group and Age 14

E. THE IMPORTANCE OF EDUCATION 15

1. Education Profile of Immigrants 15
2. Immigrant Education by Age 16
3. Education and Literacy Skills 18

F. THE IMPORTANCE OF LANGUAGE SKILLS 19

1. Language Skills Among Immigrants 19
2. Language Skills vs. Literacy Skills 21
3. Nature of Low Literacy by Age and Immigrant Group 24

G. THE IMPORTANCE OF LITERACY ACTIVITIES 27

H. THE IMPORTANCE OF LITERACY SKILLS 31

1. The Payoff of Higher Literacy Skills 31
2. Perceptions of Adequacy of Literacy Skills 32

I. CONCLUSIONS AND IMPLICATIONS 35

APPENDICES 37

Appendix A: Survey Design 37
Appendix B: Measuring Literacy Skills 39
Appendix C: Additional Tables 43
Appendix D: Regression Results 47

REFERENCES 49

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EXECUTIVE SUMMARY

This study presents a profile of the literacy skills of Ontario's immigrants, based on the new Ontario Immigrant Literacy Survey (OILS). The survey was commissioned by the Ontario Government and carried out by Statistics Canada. The study also uses the Ontario sample of the 1994 International Adult Literacy Survey (IALS) to compare the literacy skills of immigrants to Canadian-born.

A key focus of the study is to understand the connection between language knowledge and literacy skills. In particular, it is important to understand whether the English literacy skills of immigrants are primarily due to educational attainment or are mainly the result of their knowledge of English. Here are the main results of the study:

(a) The incidence of low literacy skills is a serious problem among Ontario's immigrants:

- Two-thirds of immigrants (67%) failed to reach level 3 in document literacy, a level generally considered the minimum for functioning adequately in today's society. The corresponding rate among Canadian-born was 41%.
- In the document literacy scale, 38% of immigrants placed at level 1, the lowest possible literacy level. This rate is more than double the rate of Canadian-born Ontarians (15%).
- The English literacy problem is most serious among Italian and Portuguese-speaking immigrants. In both cases, 82% failed to exceed level 2 in document literacy.

(b) For many immigrants the cause of low English literacy skills is inadequate knowledge of the English language:

- For many immigrants, the first and foremost issue is poor language skills. Unless the language issue is addressed first, there is not sufficient linguistic foundation to build strong literacy skills.
- 30% of younger immigrants (age 16-45) and 43% of older immigrants (46-69) have low English literacy skills primarily because of inadequate English language skills. These immigrants are mostly and foremost in need of improving their overall English language proficiency, as a basis for the improvement of their literacy skills in English.
- An additional 18% of immigrants did not report language problems but did not have English as their first language. However, they had English literacy skills under level 3, and so may possibly fall in the same category.

(c) Low literacy skills are almost as common among younger as among older immigrants:

- The incidence of low English literacy skills is almost as high among younger immigrants, age 16-45, as it is among older immigrants, age 46-69 (64% vs. 72%). This result suggests that more recent immigrants do not have significantly higher literacy skills than earlier immigrants.
- Among younger immigrants, Portuguese and Spanish immigrants have the highest incidence of low English literacy skills (73% and 70% respectively).
- Younger immigrants have higher levels of education than younger Canadian-born. Despite this fact, they have a higher incidence of low literacy skills (64% vs. 26%). This result suggest that, when it comes to the English literacy skills of immigrants, there are additional important factors at play besides the level of education – such as English language skills.

(d) The rate of participation of immigrants in literacy activities is similar to that of Canadian-born:

- Despite their lower English literacy skills, immigrants are as active as Canadian-born in most literacy activities, such as reading books, writing letters, attending movies or plays, volunteering, or using public libraries.

(e) The OILS results present clear evidence of the payoff of improving literacy skills among immigrants:

- Immigrants with higher literacy skills are more likely to be working and, when working, earn higher incomes. Also, they are less likely to need help with everyday literacy tasks (such as reading instructions, filling applications, or doing basic math). It is these results that provide the best argument for further promoting literacy skills in Canada.

A. INTRODUCTION

1. BACKGROUND

The 1994 International Adult Literacy Survey (IALS) revealed that immigrants have significantly lower English literacy skills than Canadian-born adults. This finding is important to Ontario, since about one-quarter of its adult population is foreign-born – a much higher percentage than in all other provinces except British Columbia.

Literacy was defined by IALS as the ability to use written information to function in society, to achieve one's goals, and to develop one's knowledge and potential. IALS tested three types of literacy: prose, document and quantitative literacy skills. In each case 5 different levels were defined. (See Section C.) Most researchers consider level 3 as a minimum and individuals scoring at the lowest two levels face significant literacy barriers at the workplace and in everyday life.

The concept of literacy is more complex in the case of immigrants because literacy in Canada presupposes knowledge of at least one of the two official languages. For example, a recent German immigrant with a university degree, but limited knowledge of English or French, would score low in the Canadian IALS. However, the same individual would probably have scored high in Germany's IALS test.

For purposes of this study, English language proficiency is defined as the attainment of skills equivalent to Level 6 in the Canadian Language Benchmarks (1966.)[1]

2. STUDY OBJECTIVES

The objective of this study is to develop a profile of Ontario immigrants' English language and literacy skills. A key focus of the study is to understand the connection between language knowledge and literacy skills. In particular, it is important to understand whether the low English literacy skills of immigrants are primarily due to low educational attainment or are mainly the result of inadequate knowledge of English.

The study will attempt to estimate the number of immigrants with low English language skills, as opposed to low English literacy skills. This distinction between the two groups is important for policy development, as wells as for program delivery.

Another important focus of this study is to probe how the current linguistic and literacy skills of immigrants affect their employment status and income level, their ability to perform literacy tasks in everyday life, and the factors that may promote or inhibit the development of their literacy skills.

---

[1] The Canadian Language Benchmarks is a task-based descriptive scale of language proficiency in English as a second language, expressed in terms of twelve benchmarks.

3. APPROACH

The study relies primarily on the new Ontario Immigrant Literacy Survey (OILS). The survey was commissioned by the Ontario Government and carried out by Statistics Canada in 1998. The new survey was necessary in order to develop accurate and detailed information on the specific literacy profile and needs of Ontario immigrants, regardless of when they immigrated. Thanks to its large sample - 4,648 respondents -- almost as high as the 5,660 sample for International Adult Literacy Survey (IALS), the OILS offers a unique opportunity for in-depth probing of the literacy skills of Ontario immigrants.

The study also makes use of the Ontario sample of the 1994 IALS. The IALS and OILS data are comparable. Although the Ontario IALS sample was too small for reliable statistics on immigrants, it provided reliable statistics on Ontario's non-immigrants. Therefore, both data sets are used here for selected comparisons between immigrant and non-immigrant Ontarians.

In what follows, Section B describes briefly the OILS survey, while Section C presents basic literacy concepts used in the study. Section D provides an overview of the literacy skills of immigrants, including comparisons by age, which also serve as proxy for comparisons between past and more recent immigrants. Section E focuses on education which, at least among Canadian-born individuals, has shown to be the most significant determinant of literacy skills.

Section F focuses on the language skills of immigrants, which is shown to be a major factor behind the high incidence of low literacy skills among immigrants. Section G looks at the extent that immigrants participate in literacy activities in everyday life -- like using public libraries or writing letters. Section H assesses the benefits of higher literacy skills among immigrants, in terms of higher earnings and ability to do everyday literacy tasks, such as reading instructions, filling applications, or doing basic math.

B. SURVEY METHODOLOGY

The OILS survey was conducted by Statistics Canada in May 1998 with the support and co-operation of the Ontario Ministry of Training, Colleges, and Universities. This section provides a brief description of the OILS survey. A more detailed description is included in Appendix A.

The target population of OILS consisted of all immigrants aged 16 to 69 at the time of the survey and residing in Ontario's six main census metropolitan areas (CMAs): Toronto (including Peel region), Hamilton, Ottawa, Kitchener, London, and St. Catharines-Niagara. Together, these six CMAs account for more than 80% of the province's immigrants, or 1.9 million persons. The survey responses were appropriately weighted to make the results representative of *all* immigrants aged 16 to 69 in Ontario's six main census metropolitan areas.[2]

One purpose of the survey was to produce estimates for Ontario's major immigrant groups. An individual's membership in a group was based on mother tongue (and country of origin in the case of persons from the Caribbean). The six major groups were as follows (*Table 1*):

- Spanish (Spanish-speaking immigrants, mostly from Latin America);
- Polish;
- Portuguese (mostly immigrants from Portugal);
- Italian;
- Caribbean including Bermuda (English mother tongue); and
- Chinese (with Cantonese or Mandarin mother tongue).

A smaller sample outside the above six major groups was surveyed in order to be able to produce estimates for all immigrants in Ontario's six main census metropolitan areas.

OILS collected responses from 4,633 Ontario immigrants. Their distribution by country of birth and language first spoken as a child is shown in *Table 1*. Among those whose first language was English, the group of primary interest consisted of those born in the Caribbean (including Bermuda). As a result, this group was kept in the English linguistic group. All other immigrants, because of their small sample number, were placed in the "other" linguistic group.

---

[2] Immigrants are defined as individuals who landed officially in Canada; as a result, non-permanent residents are excluded from the target population.

Table 1: Number of OILS Respondents by Country of Birth and Language First Spoken as a Child

Place of Birth	*Language First Spoken as a Child*							
	English	Italian	Portuguese	Polish	Spanish	Chinese	Other	All
Central America	0	2	0	0	238	0	0	240
Caribbean/Bermuda	571	0	0	0	25	1	5	602
South America	42	0	25	0	336	0	3	406
West/North Europe	123	4	1	41	0	0	58	227
Eastern Europe	1	1	0	529	0	0	86	617
Southern Europe	4	595	627	0	37	0	75	1,338
East Asia	5	0	1	0	0	672	65	743
SE/South Asia	25	0	0	0	0	31	198	254
Other	63	5	9	3	15	3	108	206
All	834	607	663	573	651	707	598	4,633

The key current language of immigrants was identified on the basis of the following question:

> ***"If you were given something to read, which language would you prefer, English or French? (Mark one only)***
>
> The actual number of responses was as follows:
>
English.....	3,876
French.....	15
Other.....	757

Because there were only 15 respondents who identified French as their key language, for reasons of statistical reliability, it was necessary to exclude them from the analysis. It is clear that in Ontario the working language of virtually all immigrants is English.[3]

[3] For information on Francophone literacy skills, see *Literacy Profile of Ontario Francophone Adults*. (Toronto, 2000).

Table 2 shows the actual number of respondents among the six major linguistic groups, as well as the weighted count. The weighted count provides an estimate of the number of immigrants in Ontario's six main census metropolitan areas. The weighting is based on the 1996 Census results.[4]

Table 2: Number of Ontario's Immigrants Age 16-69 Covered by OALS, by Immigrant Group

	6 CMA's covered by the OALS survey		Entire Ontario
	Survey sample	Weighted count	96 Census estimates
Caribbean (1)	613	192,000	203,000
Italian	607	150,000	177,000
Portuguese	663	93,000	103,000
Polish	573	71,000	83,000
Spanish	651	63,000	68,000
Chinese	707	206,000	213,000
Other (2)	819	1,124,000	1,376,000
All	4,633	1,899,000	2,223,000

Notes:

(1) English mother tongue (Caribbean and some Latin American)

(2) Including English-speaking immigrants outside Latin America

[4] The weighted count of the six linguistic groups is relatively closer to the actual sample than is the case for the "other" group. The reason is that the OILS sample was deliberately designed to over-sample the six linguistic groups, in order to provide more accurate statistics for these groups.

C. BASIC LITERACY CONCEPTS

The definition and measurement of literacy for the OILS survey followed that from the 1994 International Adult Literacy Survey (IALS). This section presents some of the basic concepts developed by IALS and followed by OILS. A more detailed discussion is included in Appendix B.

Many studies, previous to 1994 IALS, treated literacy as a skill that adults either have or do not have, and hence tried to count the number of "illiterates". These efforts often defined literacy on the basis of number of completed years of schooling or a grade-level score on reading tests.

The 1994 IALS survey design team agreed that it would be undesirable to establish a single international standard for literacy. Such a standard would not only be arbitrary, but would fail to acknowledge the multifaceted nature and complexity of literacy. Instead, the participating countries agreed that the 1994 IALS would define literacy as a mode of adult behaviour, namely:

> *Using printed and written information to function in society, to achieve one's goals, and to develop one's knowledge and potential.*

The above definition attempts to encompass a broad set of information-processing skills that adults may be called upon to use in performing many different types of tasks – at work, at home, or in their communities.

The 1994 IALS used three literacy domains: prose, document, and quantitative. To reduce the complexity and the cost of the survey, OILS tested only two of the three literacy domains: document and quantitative. The two literacy domains studied in the OILS are defined as follows:

a) *Document literacy* - the knowledge and skills required to locate and use information contained in various formats, including job applications, payroll forms, transportation schedules, maps, tables, and graphics; and

b) *Quantitative literacy* - the knowledge and skills required to apply arithmetic operations, either alone or sequentially, to numbers embedded in printed materials, such as balancing a chequebook, figuring out a tip, completing an order form, or determining the amount of interest on a loan from an advertisement.

In each of these domains, rather than expressing a threshold for achieving literacy, a scale from 0 to 500 was constructed, upon which tasks of varying difficulty were placed. For analytical purposes and for designing programs, it is useful to group people into five levels of literacy, corresponding to ranges of scores achieved:

Level 1 (0 to 225)
Level 2 (226 to 275)
Level 3 (276 to 325)
Level 4 (326 to 375)
Level 5 (376 to 500).

Levels 4 and 5 were collapsed by Statistics Canada into a single level for statistical reasons.

Literacy scores or levels are mostly useful in a comparative sense, such as measuring the relative literacy strengths of individuals or ranking the importance of various factors influencing literacy. Nevertheless, most researchers consider level 3 as the minimum required for everyday life. Individuals scoring at the lowest two levels are expected to face significant literacy barriers at the workplace and in society.

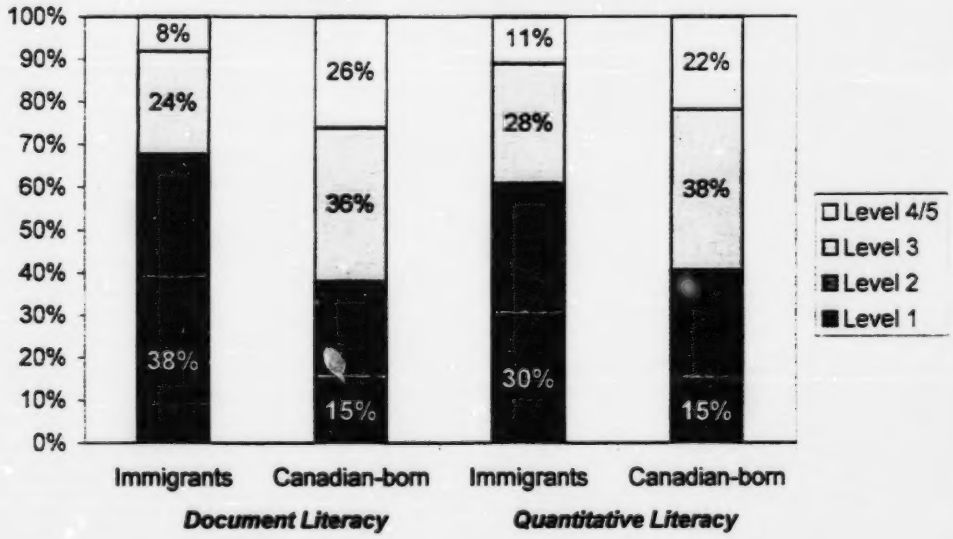
D. OVERVIEW OF IMMIGRANT LITERACY SKILLS

1. Overall Literacy Levels

Low literacy is a serious issue for Ontario's immigrants. According to OILS results, 67% of immigrants failed to reach level 3 in document literacy, a level generally considered minimum for functioning adequately in today's society.

In fact, 38% of immigrants placed at level 1 in the document literacy scale, the lowest possible literacy level. This rate is more than double the rate of Canadian-born Ontarians (15%). The quantitative literacy skills of immigrants were better than their document literacy skills, but still significantly worse than the quantitative skills of Canadian-born Ontarians (*Chart 1*).

Chart 1: Ontario Literacy Skills: Immigrants vs. Canadian-Born

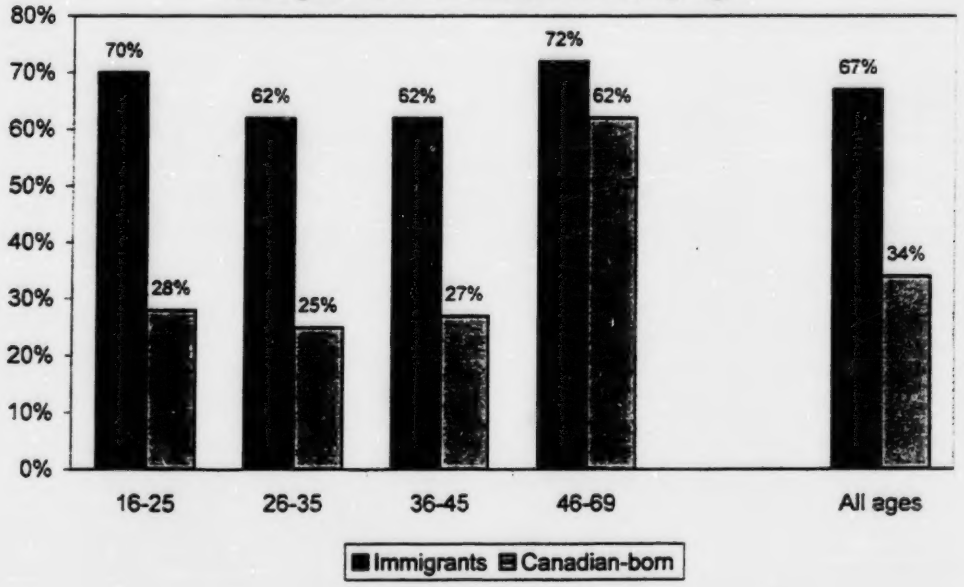


2. Literacy Levels by Age Group

The incidence of low literacy skills is almost as high among younger immigrants as it is among older immigrants (64% vs. 72%). By contrast, among Canadian-born Ontarians there is a significant difference between ages 16-45 and ages 46-65 (26% vs. 62%).[5]

Typically, younger immigrants are more recent immigrants. Therefore, the above results suggest that more recent immigrants do not have significantly higher literacy skills than earlier immigrants. Two factors to be probed later are the influence of differences between younger and older immigrants in the level of education and the lack of language skills.

Chart 2: Percent with Low Document Literacy in Ontario Immigrants vs. Canadian-born, by Age



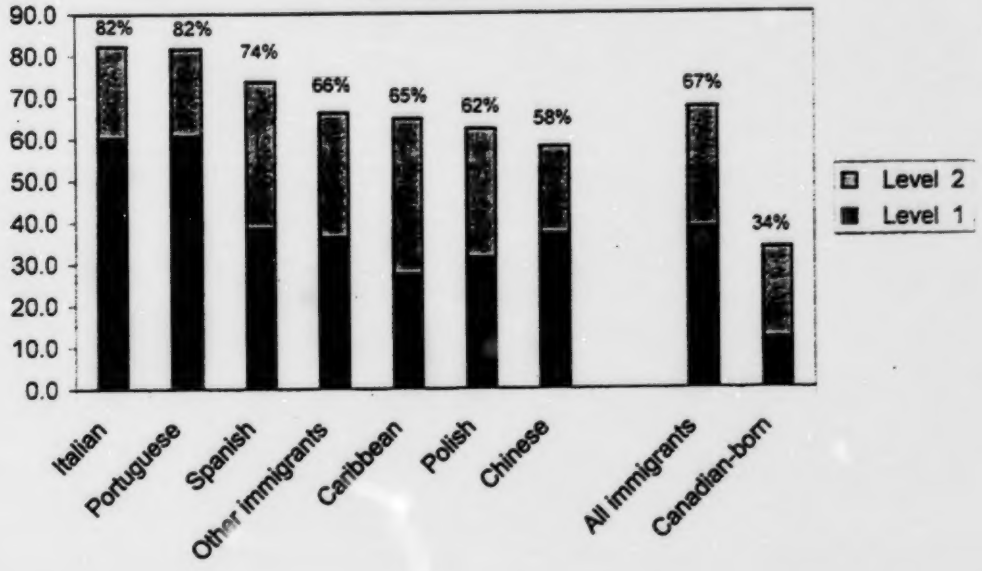
[5] As a result of how the data have been coded by Statistics Canada, the top age group is defined somewhat differently for immigrants and Canadian-born individuals: the former includes ages 66 to 69, while the latter excludes these four ages.

3. Literacy Levels by Immigrant Group

The literacy problem is most serious among Italian and Portuguese-speaking immigrants. In both cases, 82% failed to exceed level 2 in document literacy (*Chart 3*). At the other end of the literacy spectrum, Chinese-speaking immigrants faired better than other immigrants, but still considerably worse than the average Canadian-born Ontarian (58% vs. 38%).

With respect to quantitative literacy, all immigrant groups did better than in document literacy, but still significantly worse than Canadian-born Ontarians (61% vs. 41%). The ranking of quantitative literacy by immigrant group was similar to the ranking of document literacy. (See Appendix C - *Table C1.*)

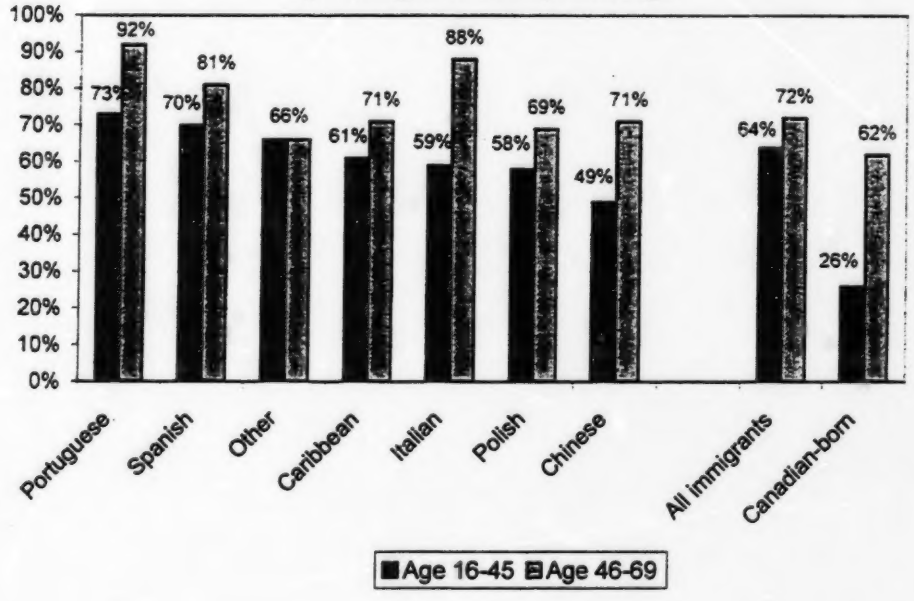
Chart 3: Percent with Low Document Literacy in Ontario by Immigrant Group



4. Literacy Levels by Immigrant Group and Age

As it was pointed out earlier, the incidence of low literacy is almost as high among younger immigrants than it is among older immigrants (64% vs. 72%). However, there are a few exceptions. Among Italian immigrants, there is a drop in the low literacy rate between older and younger immigrants by 29% (*Chart 4*). Two other immigrant groups where there is a noticeable difference in literacy skills by age are Chinese (22%) and Portuguese (19%).

Chart 4: Percent with Low Document Literacy in Ontario by Immigrant Group and Age



E. THE IMPORTANCE OF EDUCATION

1. EDUCATION PROFILE OF IMMIGRANTS

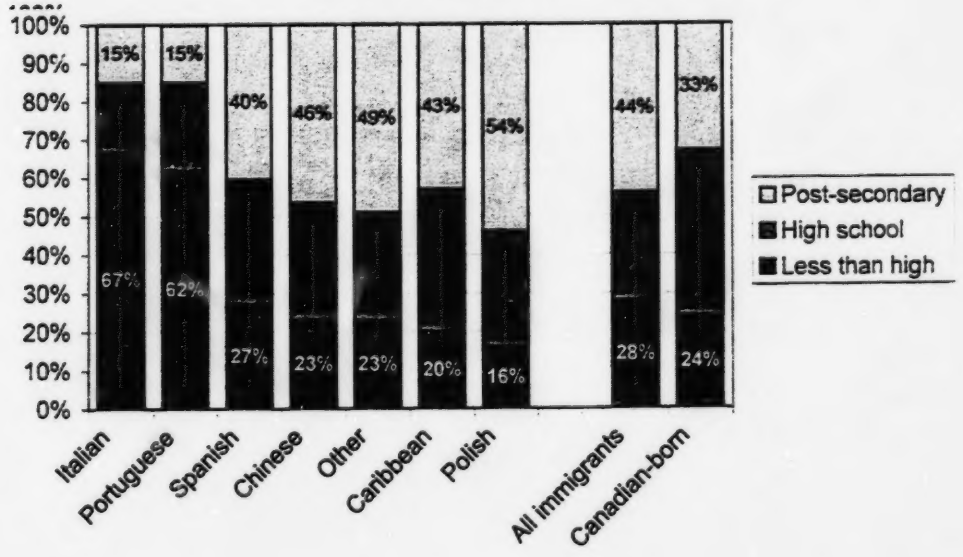
Why do immigrants generally have lower literacy skills than Canadian-born individuals? This section examines the level of education of immigrants, while the next section looks at official language skills.

Immigrant and Canadian-born Ontarians have, on average, approximately the same number years of education (13.1 vs. 13.3 years). However, the distribution of education among immigrants is less equal than is the case among Canadian-born (*Chart 5*): there are relatively more immigrants with post-secondary education (44% vs. 33%), but also relatively more immigrants without high school diploma (28% vs. 24%).

Since the incidence of low literacy skills is particularly high among those with less than high school education, the relatively greater number of immigrants without a high school education is one of the factors that explain the higher incidence of low literacy skills among immigrants.

The problem of low education is concentrated primarily among two immigrant groups: Italian and Portuguese. A majority of them (67% and 62% respectively) have less than high school education.

Chart 5: Immigrant Level of Education in Ontario
All Ages (16-69)



2. Immigrant Education by Age

The education level of both immigrants and Canadian-born Ontarians has improved significantly over time. The improvement is evident from a comparison of the education distribution of younger and older Ontarians (Charts 5a and 5b).

At the low end of the education spectrum, the percentage of younger Ontarians without high school graduation is about half that of older Ontarians. This relationship is true for both immigrants and Canadian-born.[6]

At the upper end of the education spectrum, the percentage of Canadian-born with post-secondary education is dramatically higher among younger than older individuals (37% vs. 17%). Among immigrants, the difference by age is much smaller. However, younger immigrants still have a higher rate of post-secondary education than younger Canadian-born.

The greatest improvement in levels of education is observed among Italian immigrants: younger Italian immigrants are as likely to have post-secondary education as the average Canadian-born (37%), although they still have a higher percentage without high school diploma (27% vs. 20%). Portuguese immigrants have the lowest level of education of all Ontario immigrants.

[6] The latter percentages include those still at school in the process of achieving their high school diploma.

Chart 5a: Immigrant Level of Education in Ontario
Younger Ages (16-45)

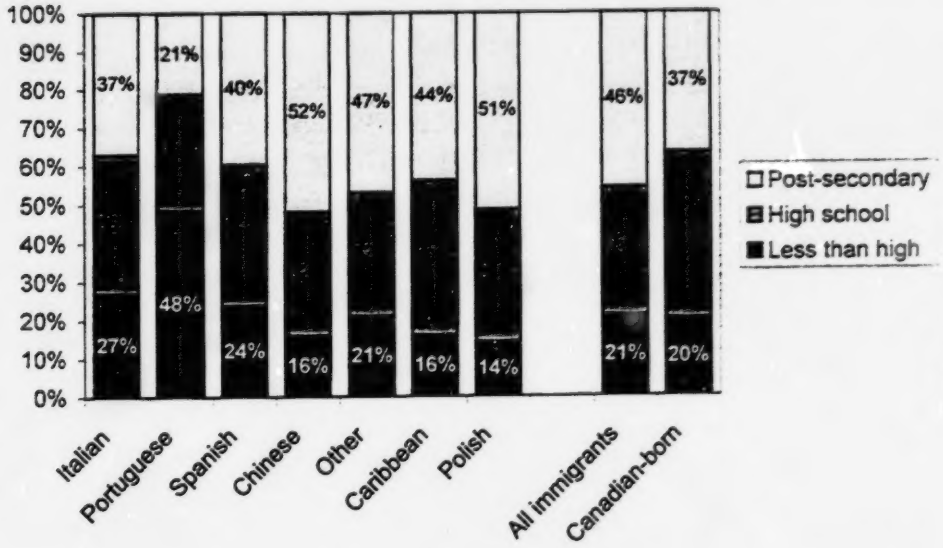
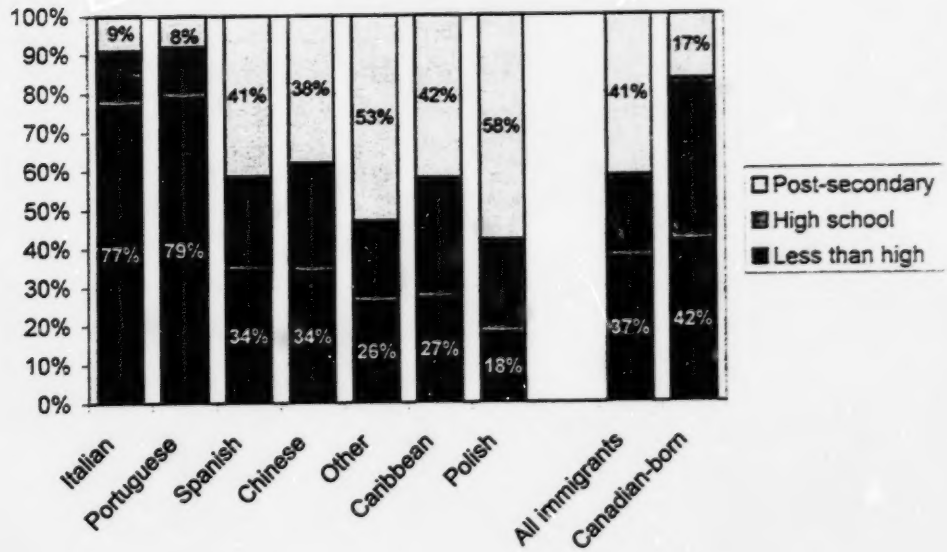


Chart 5b: Immigrant Level of Education in Ontario
Older Ages (46-69)



3. Education and Literacy Skills

Literacy studies typically show that the level of formal education is the most significant determinant, although other factors -- such as life-long learning and literacy activities in everyday life -- are also important. However, the results of this analysis are puzzling in two respects:

(a) among Ontarians age 16 to 45, immigrants have lower literacy skills than Canadian-born, despite the fact that immigrants have higher education levels than Canadian-born; and

(b) there is only a small difference in literacy skills between younger and older Ontario immigrants, despite the fact that younger immigrants have significantly higher levels of education than older immigrants.

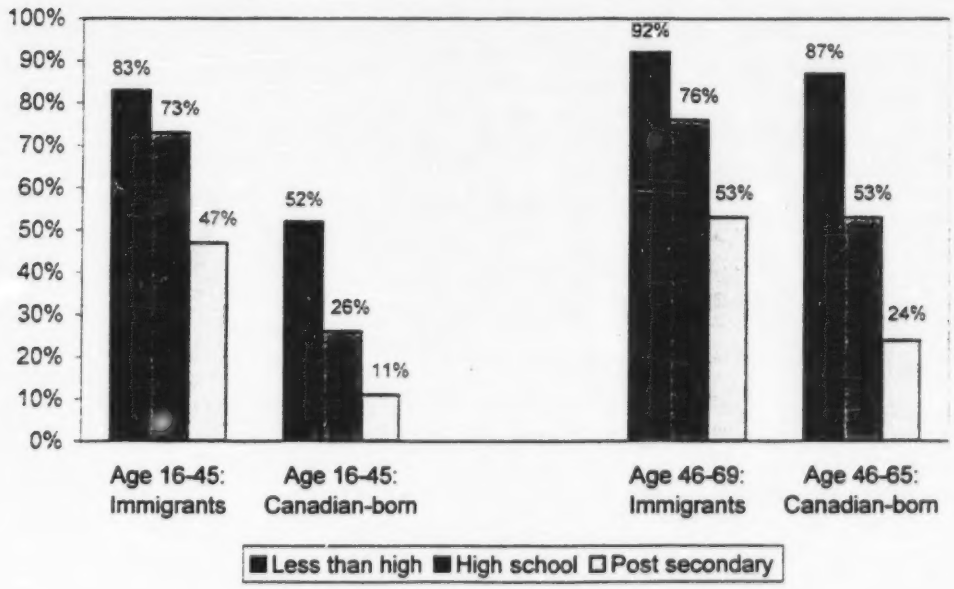
The results shown in *Chart 6* may provide an answer. The chart shows that:

(a) within the same age group and education level, the literacy skills of Canadian-born are significantly higher than the literacy skills of immigrants; and

(b) while literacy skills increase with education for all groups, the improvement is more significant among Canadian-born than immigrants.

These results clearly indicate that, when it comes to the literacy skills of immigrants, there are additional important factors at play besides the level of education. The first such factor, investigated in the following section, is the English-language skills of immigrants.

Chart 6: Percent with Low Document Literacy in Ontario by Level of Education and Age Group



F. THE IMPORTANCE OF LANGUAGE SKILLS

1. Language Skills Among Immigrants

The working language of virtually all immigrants in Ontario is English. High literacy skills among immigrants requires not simply a high level of education and cognitive skills, but sufficient language skills.

The key question addressed in this section is: How much of the low literacy skills of immigrants may be attributed simply to a lack of sufficient knowledge of English?

In order to identify immigrants with language problems, several pieces of information from OILS were combined. Immigrants were classified as having language problems when they met one or more of the following three conditions:

- did not know English well enough to carry on a conversation;
- rated their own ability to understand spoken English as poor; and
- had difficulty reading in English and scored at level 1 in the document literacy test.[7]

Table 3 shows that 15% of Ontario's immigrants have language problems. Among Portuguese, Italian and Chinese immigrants, twice as many immigrants as Ontario immigrants in general are experiencing language problems.

Language problems are more common among older immigrants. For example, the incidence of language problems is four times higher among the 56-69 age group, than in the 16-35 age group (29% vs. 7%). Although youth have a lower incidence of language problems, 20% of Portuguese youth and 23% of Chinese youth have language problems.

---

[7] A key question in OILS was: "If you were given something to read, which language would you prefer, English or French? (*Mark one only*)." Respondents were given three choices: English, French or Neither. Most of the language probing in OILS was concentrated among those who chose English or French. Only 15 respondents chose French and were excluded from the analysis for statistical reasons. Among those who chose neither English nor French, the only means to identify language problems were: (a) if they could not carry a conversation in English; and (b) if they scored at level 1 in document literacy.

Table 3: Percentage of Ontario's Immigrants with Inadequate English Language Skills

Immigrant Group	*Age Group*				
	16-35	36-45	46-55	56-69	All
Caribbean (*)	0%	0%	0%	0%	0%
Italian	(**)	7%	24%	46%	33%
Portuguese	20%	28%	39%	61%	36%
Polish	9%	14%	12%	25%	14%
Spanish	6%	14%	25%	36%	16%
Chinese	23%	24%	29%	66%	33%
Other	5%	11%	11%	18%	10%
All	7%	12%	16%	29%	15%

Notes:
(*) The mother tongue of the Caribbean sample was English.
(**) sample too small

2. Language Skills vs. Literacy Skills

Based on the respondents' document literacy test results, their first language spoken as a child, and own assessment of language skills, immigrants were classified in 10 categories, ranging from weakest literacy/language profile (document literacy at level 1, first language not English, and presence of language problems) to strongest literacy/language profile (document literacy at level 4/5 and first language English) (*Table 4*). This classification made use only of the document literacy results. (It is common among analysts to use document literacy when looking for a single indicator of literacy.)

Table 4: Classification of Ontario's Immigrants by Literacy and Language Skills

Group	Document Literacy	First Language	Language Skills (*)	(000's)	%
A. Low Literacy & Language Skills				***668***	***35%***
1	Level 1	Not English	Problems reported	250	13%
2	Level 1	Not English	No problems reported	393	21%
3	Level 2	Not English	Problems reported	25	1%
B. Low Literacy/ First Language Not English				***349***	***18%***
4	Level 2	Not English	No problems reported	349	18%
C. Low Literacy/ First Language English				***256***	***14%***
5	Level 1	English		86	5%
6	Level 2	English		170	9%
D. High Literacy Skills				***619***	***33%***
7	Level 3+	Both		619	33%
All				***1,892***	***100%***

(*) OILS did not analyse language skills among immigrants whose first language was English. Also, the study did not probe language issues among those with high literacy skills. The figure 1,892,000 represents an estimate of the number of immmigrants in the 6 Census Metropolitan Areas covered by the survey. The estimate is derived by applying to the actual number of responses (4,648) the appropriate weights provided by Statistics Canada.

Immigrants were further grouped into three low literacy clusters (document literacy below level 2) depending on their first language, their level of literacy, and whether they reported any language problems or not (*Chart 8*).

Cluster A: Low literacy & language skills

- 668,000 of Ontario's immigrants (or 35% of all immigrants) have inadequate English literacy and English language skills. This population includes:
  a) 250,000 immigrants with a serious lack of English skills, reflected in both low literacy scores and their own perceptions of inadequate language skills (group 1);
  b) 25,000 immigrants who scored at level 2, which is still inadequate, and reported having language problems (group 4);
  c) 393,000 immigrants who did not report any language problems, but scored at the lowest literacy level (level 1) and their first language was not English, suggesting they have inadequate English language skills (group 2).

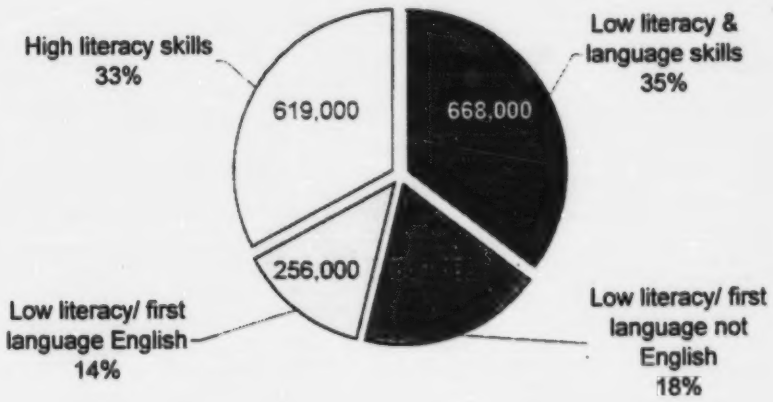
Cluster B: Low literacy/ First language not English

- 349,000 of Ontario's immigrants (18% of all immigrants) scored at level 2 in document literacy and did not report any language problems (group 5). This group is primarily in need of literacy skills upgrading, rather than language skills upgrading. However, English language skills may still be a problem since the first language of this group is not English.

Cluster C: Low literacy/ First language English

- 256,000 immigrants (or 14% of all immigrants) scored below level 3 in document literacy and their first language was English (groups 3 and 6). The nature of the problem of this group is similar to that of Canadian-born with low literacy skills.

Chart 8: Classification of Ontario's Immigrants by Adequacy of Literacy and English Language Skills



3. Nature of Low Literacy by Age and Immigrant Group

This section applies the above developed classification to probe the nature of low English literacy among immigrants:

- first by age; and
- then by immigrant group within the younger age cohort (age 16 to 45).

Chart 9a shows that both younger and older immigrants have low language skills, but the problem is somewhat less serious among younger immigrants. In particular, 30% of younger immigrants (age 16 to 45) have low literacy and low English language skills, compared to 43% among older immigrants (age 46 to 69).

In addition, 23% of younger immigrants and 13% of older immigrants have low literacy skills and their first language is not English. Finally, 11% of younger immigrants and 17% of older immigrants have low literacy skills, but their first language is English.

Chart 9a: Percent with Low Document Literacy by Level of Language Problems:
Young vs. Older Ontario Immigrants

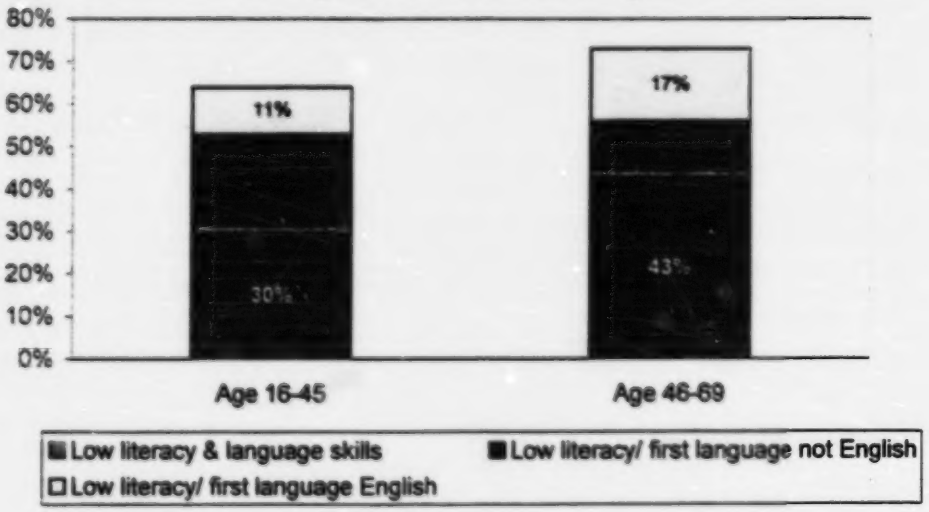
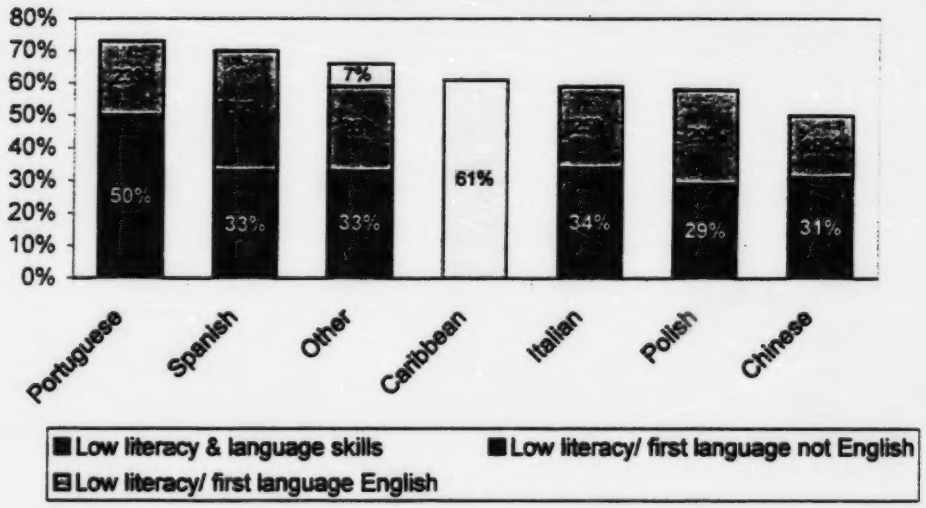


Chart 9b shows that the incidence of low English literacy and low English language skills (i.e. those with literacy level one and/or reporting language problems) is around 33% across most immigrant groups in the 16-to-45 age group. One group that stands out, though, with a considerably higher than average incidence, is Portuguese immigrants (50%).

As pointed out earlier, still among those age 16-to-45, the incidence of low literacy skills in general (regardless of the presence of language problems or not) is highest among Portuguese immigrants (73%) and lowest among Chinese immigrants (49%).

Chart 9b: Percent with Low Document Literacy by Level of Language Skills:
Immigrant Groups Age 16-45



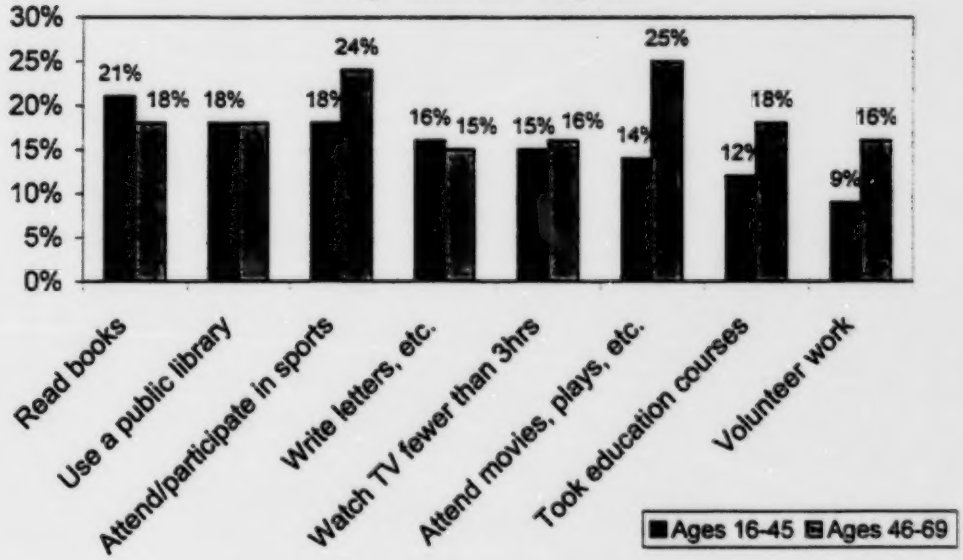
G. THE IMPORTANCE OF LITERACY ACTIVITIES

The acquisition and maintenance of high literacy skills is a life-long process. While language skills and formal education are key determining factors, it is equally important that literacy skills are maintained and upgraded through regular use in everyday life and through educational upgrading and retraining.

Chart 10 shows that activities like reading books, using public libraries, or participating in sports has benefits with respect to literacy skills. For example, younger immigrants who read books regularly have a lower incidence of low literacy skills (by 21 percentage points), compared to those who do not read books. Similar results are observed among older immigrants.

The correlation between literacy activities and literacy skills was confirmed through regression analysis. (See Appendix D.) To some extent, this correlation reflects the simple fact that those with higher literacy skills tend to engage more frequently in literacy activities. However, there is little doubt that literacy activities do contribute to better literacy skills.

Chart 10: Difference in Low Document Literacy Rate
Non-Participants vs. Participants in Literacy Activities
Among Ontario's Immigrants



The results of the study show that immigrants participate in literacy activities to about the same degree as Canadian-born:

- *Charts 11a and 11b* show that the rate of participation in most types of everyday literacy activities between immigrants and Canadian-born is similar, both among younger and older ages. A possible exception is attendance or participation in sports, where the rate of participation of immigrants is relatively lower.
- *Chart 12* shows that the rate of participation in literacy activities at the workplace between immigrants and Canadian-born is also similar.

These results are surprising, given that the literacy skills of immigrants are lower than those of Canadian-born and that there is a strong positive correlation between literacy activities and literacy skills.

Chart 11a: Literacy Activities in Everyday Life
Immigrants vs. Canadian-born, Ontario, Ages 16 to 45

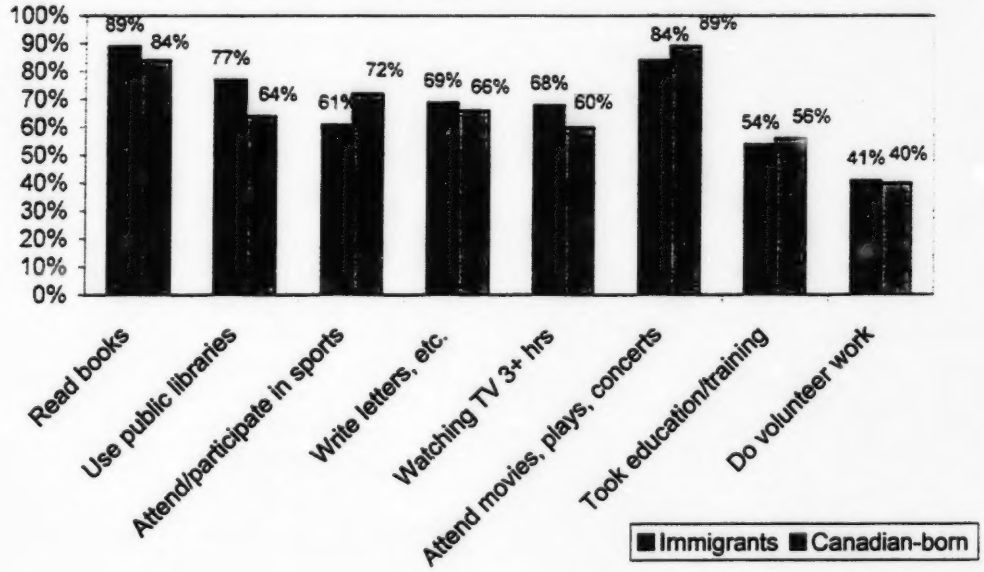


Chart 11b: Literacy Activities in Everyday Life
Immigrants vs. Canadian-born, Ontario, Ages 46 to 69

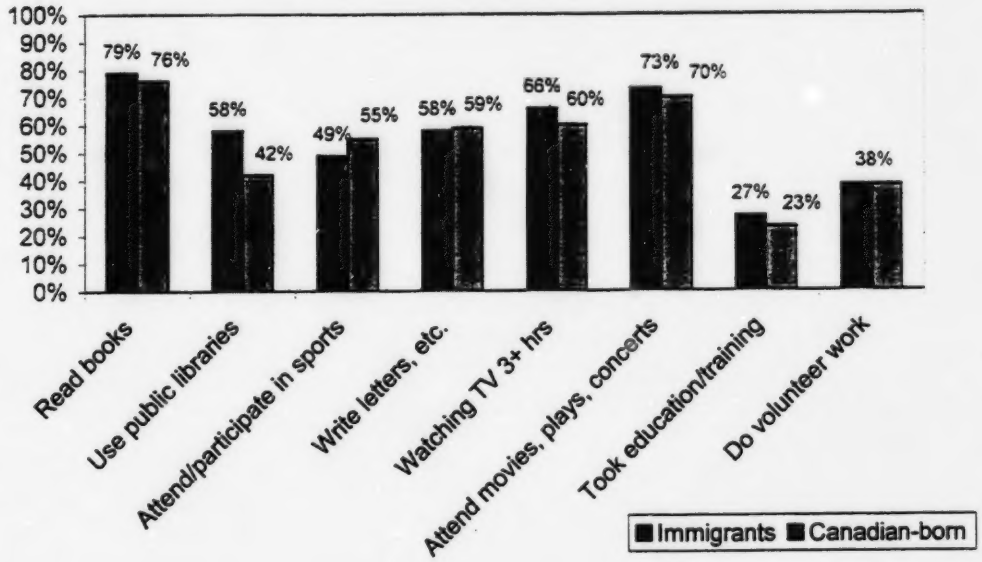
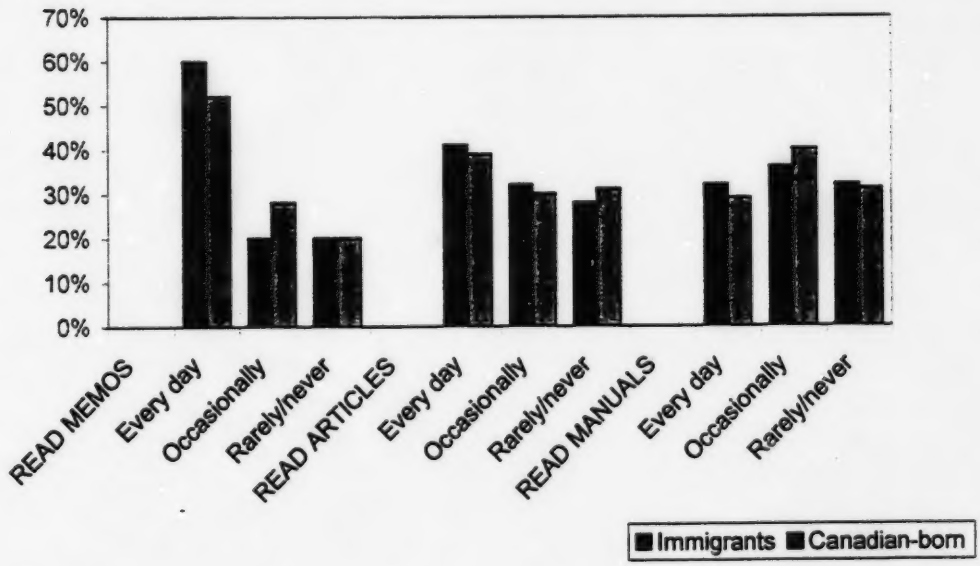


Chart 12: Literacy Activities at the Workplace
Ontario Immigrants vs. Canadian-born, Ontario adults

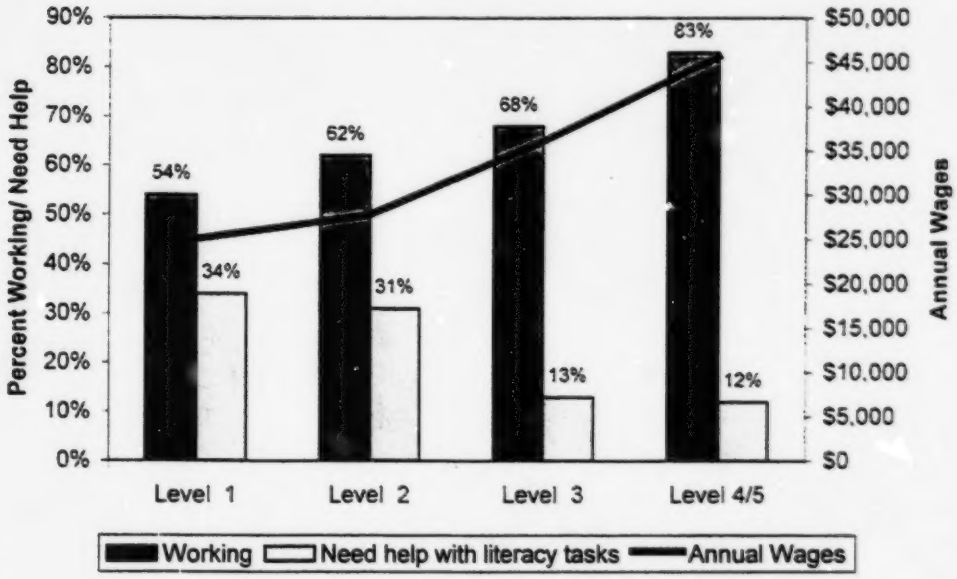


H. THE IMPORTANCE OF LITERACY SKILLS

1. THE PAYOFF OF HIGHER LITERACY SKILLS

The OILS results present clear evidence of the payoff of high literacy skills. *Chart 13* shows that immigrants with higher literacy skills are more likely to be working and, when working, earn higher incomes. Also, they are less likely to need help with everyday literacy tasks, such as reading instructions, filling applications, or doing basic math.[8] These results provide a strong argument for further developing literacy skills.

Chart 13: Indicators of Benefits of Higher Literacy Skills Among Ontario's Immigrants



[8] In Chart 13, the variable "need help with literacy tasks," shows the percentage of tasks with which respondents need help. The tasks include: reading articles; reading government documents; filling applications; reading medical instructions; reading store information; doing basic math; writing notes or letters.

2. Perceptions of Adequacy of Literacy Skills

One of the challenges facing policy makers is that low literacy skills are not always recognised as a problem among those with low literacy skills. For example, even among those who scored at the lowest level of document literacy (level 1), almost two-thirds felt that their English reading skills were good or excellent (*Chart 14*).

Similarly, very few individuals with low literacy skills recognise that they reading skills are limiting their job opportunities. In particular, 62% of those in the lowest document literacy level, and 89% in the second lowest document literacy level, felt that their reading skills were not limiting their job opportunities (*Chart 15*).

The discrepancy between actual and perceived literacy skills reflects a lack of awareness. For example, individuals with low literacy skills may cope by pursuing jobs with low literacy requirements. In such cases, individuals may be less aware of the financial consequences of their limited literacy skills. The above discrepancy between actual and perceived literacy skills is not unique to immigrants; similar results are obtained by analysing the responses of Canadian-born Ontarians.

Chart 14: Perceptions of Adequacy of Reading Skills Among Ontario's Immigrants

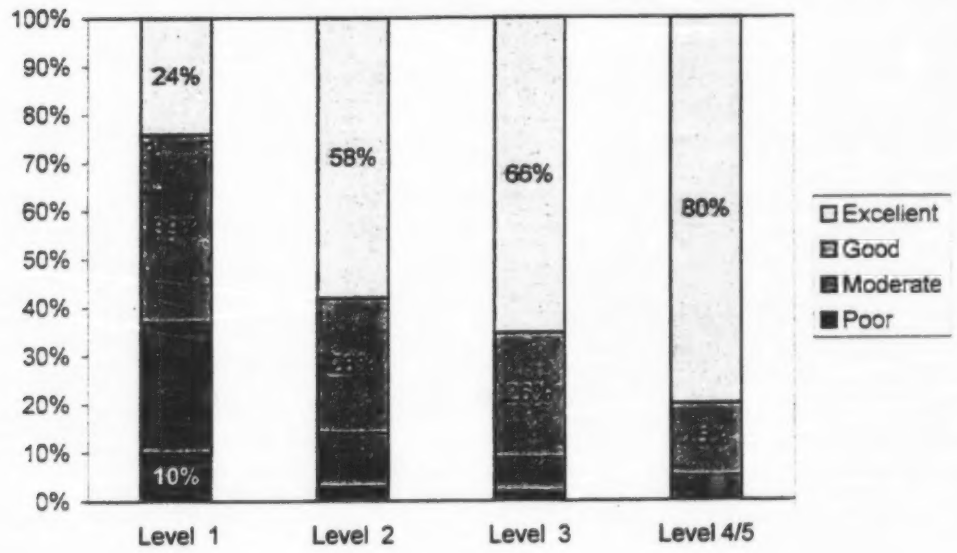
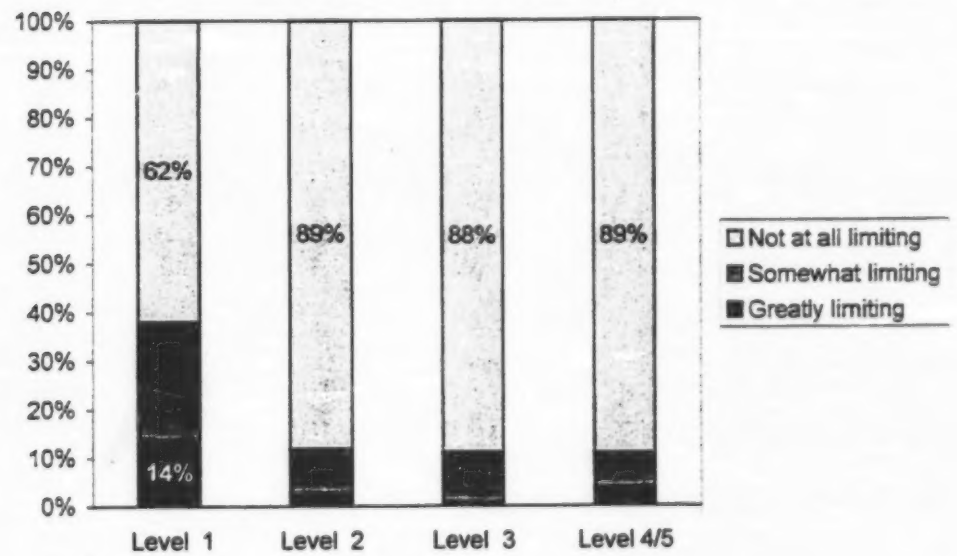


Chart 15: Extent Reading Skills Limit Job Opportunities Among Ontario's Immigrants



I. CONCLUSIONS AND IMPLICATIONS

Ontario is the only province to commission a survey of literacy skills among immigrants. The OILS results show that low literacy skills is a widespread and important issue among Ontario immigrants. The issue is not primarily related to education. In fact, on average younger immigrants have a higher level of education than Canadian-born. Rather, the problem appears to be more related to poor command of the English language, which is the language of the workplace for virtually all immigrants in Ontario.

For many immigrants with low literacy skills, the basic issue is improving language skills. Our results show that over one-third of Ontario's immigrants have both low literacy and low language skills. For these immigrants, the first and foremost issue is poor language skills. Unless the language issue is addressed first, there is not the sufficient linguistic foundation for strong literacy skills. An additional 18% of immigrants, who did not report language problems but whose first language was not English and who had less than level 3 literacy skills, may fall in the same category.

A significant challenge is that many immigrants, even among those who scored at the lowest literacy level, do not perceive that they have a problem. For example, the majority feel that their reading skills are good or excellent; only a small percentage feel that their reading skills limit their job opportunities.

The information derived from the survey will assist in guiding immigrants to the most appropriate type of programming - Literacy and Basic Skills or English-as-a-Second-Language. It will also aid decision-makers in government and the community in ensuring the correct mix of services to ensure that immigrants to Ontario may make the greatest contribution to the economy and society.

APPENDICES

APPENDIX A: SURVEY DESIGN

1. OVERVIEW OF THE SAMPLING DESIGN

A two-stage stratified sampling design was used, with dwellings as the primary sampling unit. At most one person was selected per selected dwelling. Since the 1996 Census was used as the dwelling frame, the sampling design is truly a two-stage plan, where the census was the first stage and the OILS was the second.

2. TARGET POPULATION

The target population was defined as consisting of all immigrants aged 16 to 69 at the time of the collection and residing in Ontario's six main census metropolitan areas (CMAs): Toronto (including Peel Region), Hamilton, Ottawa, Kitchener, London and St. Catharines-Niagara. Together, these six CMAs account for more than 80% of the province's immigrants, or 1.9 million persons. It should be noted that immigrants were defined as any individuals who have officially landed (regardless of the date). This definition means that non-permanent residents were excluded from the target population.

3. GROUPS OF INTEREST

Six linguistic groups were identified as being of particular interest: Spanish, Polish, Portuguese, Italian, Caribbean with mother tongue of English, and Chinese. Individuals' membership in a group was based on their mother tongue (and country of origin in the case of persons from the Caribbean). The main purpose of the survey was to produce estimates for these groups in particular. A secondary objective is to produce estimates for the immigrant population as a whole.

4. SAMPLING FRAME

The 1996 Census of Population was used as the dwelling sampling frame. Census data were used to identify dwellings with a high probability of containing immigrants, and this set of dwellings constituted the sampling frame. In order to optimise the sampling design, dwellings with a low probability of containing immigrants were not included in the sampling frame.

5. Frame Coverage

As a result of using the 1996 Census, the dwelling frame did not provide perfect coverage of the target population. In particular, it did not cover immigrants residing in new dwellings (dwellings constructed after May 14, 1996, the date of the census). Also, the exclusion of dwellings with a low probability of containing immigrants means that immigrants residing in such dwellings at the time of the survey were not covered either. It is hard to quantify the proportion of immigrants not covered for these reasons, but there is every indication that it lies within an acceptable range.

6. Selection of Individuals

The selection of one individual per dwelling was done after the interviewer completed the list of members of the household. This list also served to identify the target population, since members were each asked their age and whether they were born in Canada. The selection was done using a Kish grid, only for members between 16 and 69 years of age who were born outside Canada. In order to keep the procedures as simple as possible, we did not attempt to distinguish non-permanent residents (NPRs) from immigrants at the selection stage.

APPENDIX B: MEASURING LITERACY SKILLS

1. OVERVIEW

The performance results for the Ontario Immigrant Literacy Survey (OILS) are reported on two scales - document and quantitative - rather than on a single scale. Each scale ranges from 0 to 500. Scale scores have, in turn, been grouped into five empirically determined literacy levels. Each of these levels implies an ability to cope with a particular subset of reading tasks. *Table B1* provides an overview of the five document and quantitative literacy levels.

While the literacy scales make it possible to compare the document and quantitative skills of different populations and to study the relationships between literacy skills and various factors, the scale scores by themselves carry little or no meaning. In other words, whereas most people have a practical understanding of what it means when the temperature outside reaches 10° C, it is not intuitively clear what it means when a particular group is at 250 on the document scale, or in Level 2 on the quantitative scale.

One way to gain some understanding about what it means to perform at various points along a literacy scale is to identify a set of variables that can be shown to underlie performance on these tasks. Collectively, these variables provide a framework for understanding what is being measured in a particular assessment and what skills and knowledge are being demonstrated by various levels of proficiency.

The literacy levels provided in the OILS data were based on the Canadian data from the International Adult Literacy Survey (IALS). In the 1994 IALS, item response theory (IRT) scaling procedures provided a statistical solution for establishing one or more scales for a set of tasks in which the ordering of difficulty was essentially the same for everyone. First, the difficulty of tasks was ranked on the scale according to how well respondents actually performed them. Next, individuals were assigned scores according to how well they did on a variety of tasks at different levels.

The scale point assigned to each task was the point at which individuals with that proficiency score had a given probability of responding correctly. In the 1994 IALS, an 80% probability of correct response was the criterion used.

Table B1: Description of Document and Quantitative Literacy Levels (Part A)

Level	Document	Quantitative
1 *0 to 225*	Most of the tasks at this level require the reader to locate a piece of information based on a literal match. Distracting information, if present, is typically located away from the correct answer. Some tasks may direct the reader to enter personal information onto a form.	Although no quantitative tasks used in the IALS fall below the score value of 225, experience suggests that such tasks would require the reader to perform a single, relatively simple operation (usually addition) for which either the numbers are already entered onto the given document and the operation is stipulated, or the numbers are provided and the operation does not require the reader to borrow.
2 *226 to 275*	Document tasks at this level are a bit more varied. While some still require the reader to match on a single feature, more distracting information may be present or the match may require a low-level inference. Some tasks at this level may require the reader to enter information onto a form or to cycle through information in a document.	Tasks in this level typically require readers to perform a single arithmetic operation (frequently addition or subtraction) using numbers that are easily located in the text or document. The operation to be performed may be easily inferred from the wording of the question or the format of the material (for example, a bank deposit form or an order form).
3 *276 to 325*	Tasks at this level appear to be most varied. Some require the reader to make literal or synonymous matches, but usually the matches require the reader to take conditional information into account or to match on multiple features of information. Some tasks at this level require the reader to integrate information from one or more displays of information. Other tasks ask the reader to cycle through a document to provide multiple responses.	Tasks found in this level typically require the reader to perform a single operation. However, the operations become more varied -- some multiplication and division tasks are found in this level. Sometimes two or more numbers are needed to solve the problem and the numbers are frequently embedded in more complex displays. While semantic relation terms such as "how many" or "calculate the difference" are often used, some of the tasks require the reader to make higher order inferences to determine the appropriate operation.

Table 1: Description of Document and Quantitative Literacy Levels (Part B)

4 *326 to 375*	Tasks at this level, like those in the previous levels, ask the reader to match on multiple features of information, to cycle through documents, and to integrate information; frequently however, these tasks require the reader to make higher order inferences to arrive at the correct answer. Sometimes, conditional information is present in the document, which must be taken into account by the reader.	With one exception, the tasks at this level require the reader to perform a single arithmetic operation where typically either the quantities or the operation are not easily determined. That is, for most of the tasks at this level, the question or directive does not provide a semantic relation term such as "how many" or "calculate the difference" to help the reader.
5 *376 to 500*	Tasks at this level require the reader to search through complex displays of information that contain multiple distracters, to make high-level inferences, process conditional information, or use specialised knowledge.	These tasks require readers to perform multiple operations sequentially, and they must disembed the features of the problem from the material provided or rely on background knowledge to determine the quantities or operations needed.

Individuals estimated to have a particular scale score would have consistently performed tasks - with an 80% probability - like those at that point on the scale. It also meant they would have had a greater than 80% chance of performing tasks that are lower than their estimated proficiency on the scale. It does not mean, however, that individuals with low proficiency could never have succeeded at more difficult tasks - that is, on tasks with difficulty values higher than their proficiencies. They may have done so some of the time. Thus, it meant that their probability of success was relatively low. In other words, the more difficult the task relative to their proficiency, the lower the likelihood of a correct response.

An analogy might help clarify this point. The relationship between task difficulty and individual proficiency is much like the high jump event in track and field, in which an athlete tries to jump over a bar that is placed at increasing heights. Each high jumper has a height at which he or she is proficient. That is, the jumper can clear the bar at that height with a high probability of success, and can clear the bar at lower heights almost every time. When the bar is higher than the athlete's level of proficiency, however, it is expected that the athlete will be unable to clear the bar consistently.

Once the literacy tasks were placed along each of the scales using the criterion of 80%, it was possible to see how well the interactions among various task characteristics explained the placement of tasks along the scales. Analyses of the interactions between the materials being read and the tasks based on these materials revealed that an ordered set of information-processing skills appeared to be called into play to perform successfully the various tasks displayed along each scale (Kirsch and Mosenthal 1994).

It is worth noting that, while some of the tasks were at the low end of a scale and some at the very high end, most had values in the 200-to-400 range. It is also important to recognise that these levels were selected not as a result of any statistical property of the scales, but rather as the result of shifts in the skills and strategies required to succeed on various tasks along the scales, ranging from simple to complex.

APPENDIX C: ADDITIONAL TABLES

Table C1: Distribution of Ontario's Population by Characteristics

	Immigrants			*Canadian-born*		
	16-45	45-69	All	16-45	45-69	All
Immigrant Group						
Caribbean (English)	11%	9%	10%			
Italian	3%	15%	8%			
Portuguese	5%	5%	5%			
Polish	4%	3%	4%			
Spanish	4%	3%	3%			
Chinese	11%	10%	11%			
Other	63%	54%	59%			
Education						
Less than high school	21%	37%	28%	20%	42%	24%
Completed high school	33%	21%	28%	43%	42%	43%
Post-secondary education	46%	41%	44%	37%	17%	33%
Gender						
Male	49%	48%	48%	54%	48%	53%
Female	51%	52%	52%	46%	52%	47%
Work Situation						
Employed	66%	57%	62%	71%	59%	69%
Unemployed	5%	4%	5%	5%	2%	4%
Student	19%	0%	11%	12%	0%	10%
Retired/Homemaker	10%	39%	22%	12%	38%	18%
All	100%	100%	100%	100%	100%	100%

Source: Immigrants: 1998 OILS; Canadian-born: 1994 IALS.

Table C2: Incidence of Low Document Literacy Skills Among Ontarians, by Characteristics

	Immigrants			*Canadian-born*		
	16-45	45-69	All	16-45	45-69	All
Immigrant Group						
Caribbean (English)	61%	71%	65%			
Italian	59%	88%	82%			
Portuguese	73%	92%	82%			
Polish	58%	69%	62%			
Spanish	70%	81%	74%			
Chinese	49%	71%	58%			
Other	66%	66%	66%			
Education						
Less than high school	83%	92%	88%	52%	87%	65%
Completed high school	73%	76%	74%	26%	53%	32%
Post-secondary education	47%	53%	49%	11%	24%	13%
Gender						
Male	66%	71%	68%	22%	64%	30%
Female	61%	74%	67%	32%	61%	38%
Work Situation						
Employed	60%	64%	62%	23%	57%	29%
Unemployed	78%	(*)	81%	(*)	(*)	(*)
Student	67%	(*)	67%	32%	(*)	32%
Retired/Homemaker	71%	82%	79%	42%	72%	55%
All	64%	72%	67%	26%	62%	34%

Source: Immigrants: 1998 OILS; Canadian-born: 1994 IALS.
(*) Sample too small

Table C3: Incidence of Low Quantitative Literacy Skills Among Ontarians, by Characteristics

	Immigrants			*Canadian-born*		
	16-45	45-69	All	16-45	45-69	All
Immigrant Group						
Caribbean (English)	55%	67%	60%			
Italian	58%	81%	77%			
Portuguese	68%	92%	79%			
Polish	45%	55%	49%			
Spanish	64%	70%	66%			
Chinese	42%	60%	49%			
Other	65%	54%	60%			
Education						
Less than high school	78%	87%	83%	58%	78%	65%
Completed high school	71%	57%	66%	30%	51%	34%
Post-secondary education	44%	43%	44%	14%	15%	14%
Gender						
Male	62%	60%	61%	24%	60%	31%
Female	59%	64%	61%	37%	53%	41%
Work Situation						
Employed	58%	54%	57%	28%	54%	33%
Unemployed	68%	(*)	68%	(*)	(*)	(*)
Student	63%	(*)	63%	29%	(*)	30%
Retired/Homemaker	64%	74%	71%	42%	62%	50%
All	60%	62%	61%	30%	56%	35%

Source: Immigrants: 1998 OILS; Canadian-born: 1994 IALS.
(*) Sample too small

Table C4: Rate of Participation in Every-Day Literacy Activities Among Ontarians

	Immigrants			*Canadian-born*		
	16-45	45-69	All	16-45	45-69	All
Took education or training	54%	27%	43%	56%	23%	49%
Used a public library	77%	58%	69%	64%	42%	59%
Attended movies, plays, or concerts	84%	73%	80%	89%	70%	85%
Attended/participated in sports	61%	49%	56%	72%	55%	69%
Wrote letters, etc.	69%	58%	65%	66%	59%	65%
Did volunteer work	41%	38%	40%	40%	38%	40%
Red books	89%	79%	85%	84%	76%	82%
Watched TV fewer than 3 hours	68%	66%	67%	60%	60%	60%

Source: Immigrants: 1998 OILS; Canadian-born: 1994 IALS.

APPENDIX D: REGRESSION RESULTS

Table D1: Logit Regression Results: Ontario Immigrants Age 16-45
Dependent Variable: Incidence of Low Document Literacy

Variable	*Explanation*	B	S.E.	Sig	Exp(B)
EDUC	EDUCATION				
EDUC(0)	Less than high school	*Reference category*			
EDUC(1)	High school	-0.579	0.152	0.000	0.561
EDUC(2)	Post-secondary education	-1.448	0.143	0.000	0.235
GFSTLANG	LANGUAGE FIRST SPOKEN AS CHILD				
GFSTLANG(0)	Caribbean (English)	*Reference category*			
GFSTLANG(1)	Italian	-0.217	0.313	0.488	0.805
GFSTLANG(2)	Portuguese	-0.127	0.283	0.655	0.881
GFSTLANG(3)	Polish	-0.200	0.268	0.456	0.819
GFSTLANG(4)	Spanish	0.259	0.289	0.370	1.295
GFSTLANG(5)	Chinese	-0.702	0.200	0.000	0.496
GFSTLANG(6)	Other	0.284	0.152	0.062	1.329
TRAIN(1)	TOOK EDUCATION/TRAINING IN 1997	-0.221	0.097	0.022	0.802
HPUB(1)	USE A PUBLIC LIBRARY	-0.559	0.126	0.000	0.572
HMOVIE(1)	ATTEND MOVIES,PLAYS,CONCERTS	-0.474	0.142	0.001	0.623
HSPORT(1)	ATTEND/PARTICIPATE IN SPORTS	-0.507	0.105	0.000	0.602
HLETTE(1)	WRITE LETTERS ETC.	0.117	0.122	0.338	1.125
HVOLU(1)	DO VOLUNTEER WORK	-0.299	0.102	0.003	0.742
HBOOK(1)	READ BOOKS	-0.600	0.179	0.001	0.549
HTV(1)	TV DAILY FEWER THAN 3 HOURS	-0.555	0.105	0.000	0.574
Constant		3.563	0.265	0.000	
	Total number of cases:	2,502			
	-2 Log Likelihood - before:	3,267			
	-2 Log Likelihood - after:	2,767			
	Percentage improvement	15%			

Note: coefficient is statistically significant at the 95% level of confidence if Sig <0.05

Table D2: Logit Regression Results: Ontario Immigrants Age 46-69
Dependent Variable: Incidence of Low Document Literacy

Variable	*Explanation*	B	S.E.	Sig	Exp(B)
EDUC	EDUCATION				
EDUC(0)	Less than high school	*Reference category*			
EDUC(1)	High school	-0.939	0.191	0.000	0.391
EDUC(2)	Post-secondary education	-1.447	0.187	0.000	0.235
GFSTLANG	LANGUAGE FIRST SPOKEN AS CHILD				
GFSTLANG(0)	Caribbean (English)	*Reference category*			
GFSTLANG(1)	Italian	0.105	0.269	0.697	1.110
GFSTLANG(2)	Portuguese	0.312	0.440	0.478	1.366
GFSTLANG(3)	Polish	-0.024	0.337	0.944	0.977
GFSTLANG(4)	Spanish	0.293	0.409	0.473	1.341
GFSTLANG(5)	Chinese	-0.648	0.260	0.013	0.523
GFSTLANG(6)	Other	-0.192	0.190	0.314	0.826
TRAIN(1)	TOOK EDUCATION/TRAINING IN 1997	0.180	0.130	0.166	1.198
HPUB(1)	USE A PUBLIC LIBRARY	-0.077	0.144	0.592	0.926
HMOVIE(1)	ATTEND MOVIES,PLAYS,CONCERTS	-1.048	0.169	0.000	0.351
HSPORT(1)	ATTEND/PARTICIPATE IN SPORTS	-0.811	0.124	0.000	0.445
HLETTE(1)	WRITE LETTERS ETC.	0.251	0.153	0.102	1.285
HVOLU(1)	DO VOLUNTEER WORK	-0.297	0.127	0.020	0.743
HBOOK(1)	READ BOOKS	-0.450	0.202	0.026	0.638
HTV(1)	TV DAILY FEWER THAN 3 HOURS	-0.598	0.131	0.000	0.550
Constant		3.938	0.276	0.000	
	Total number of cases:	2,131			
	-2 Log Likelihood - before:	2,473			
	-2 Log Likelihood - after:	1,910			
	Percentage improvement	23%			

Note: coefficient is statistically significant at the 95% level of confidence if Sig <0.05

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